Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Common Name/Trade Name</th>
<th>o-Cresol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog Number(s)</td>
<td>XX858, C1368</td>
</tr>
<tr>
<td>CAS#</td>
<td>95-48-7</td>
</tr>
<tr>
<td>RTECS</td>
<td>GO8300000</td>
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<tr>
<td>TSCA</td>
<td>TSCA 8(b) inventory: o-Cresol</td>
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<tr>
<td>Manufacturer</td>
<td>SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248</td>
</tr>
<tr>
<td>Commercial Name(s)</td>
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<tr>
<td>Synonym</td>
<td>1-Hydroxy-2-methylbenzene; 2-Cresol; 2-Hydroxytoluene; 2-Methylphenol; o-Cresylic acid; o-Hydroxytoluene; o-Methylphenol o-Oxytoluene; o-Tolue; Orthocresol; Phenol, 2-methyl-</td>
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<td>Chemical Name</td>
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<tr>
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<td>Chemical Formula</td>
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<tr>
<td>Supplier</td>
<td>SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248</td>
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</table>

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
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</thead>
<tbody>
<tr>
<td>o-Cresol</td>
<td>95-48-7</td>
<td>22</td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients:
- **o-Cresol**:
  - **ORAL (LD50)**: Acute: 121 mg/kg [Rat], 344 mg/kg [Mouse].
  - **DERMAL (LD50)**: Acute: 890 mg/kg [Rabbit], 620 mg/kg [Rat].
  - **INHALATION (MIST) (LC50)**: Acute: 179 mg/m³ 2 hours [Mouse].

Section 3. Hazards Identification

Potential Acute Health Effects:
- Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Continued on Next Page
### Section 4. First Aid Measures

#### Eye Contact
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

#### Skin Contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

#### Serious Skin Contact
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

#### Inhalation
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

#### Serious Inhalation
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

#### Ingestion
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

#### Serious Ingestion
Not available.

### Section 5. Fire and Explosion Data

#### Flammability of the Product
May be combustible at high temperature.

#### Auto-Ignition Temperature
598.89°C (1110°F)

#### Flash Points
CLOSED CUP: 81°C (177.8°F).

#### Flammable Limits
LOWER: 1.4%

#### Products of Combustion
These products are carbon oxides (CO, CO2).

#### Fire Hazards in Presence of Various Substances
Flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

#### Explosion Hazards in Presence of Various Substances
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

#### Fire Fighting Media and Instructions
**SMALL FIRE:** Use DRY chemical powder. **LARGE FIRE:** Use water spray, fog or foam. Do not use water jet.

#### Special Remarks on Fire Hazards
When heated to decomposition it emits highly toxic fumes. When heated to decomposition it emits irritating fumes.

#### Special Remarks on Explosion Hazards
Not available.

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*Continued on Next Page*
Section 6. Accidental Release Measures

Small Spill
Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill
Corrosive solid. Poisonous solid.
Stop leak if without risk. If the product is in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liquid form: Do not get water inside container. Absorb with an inert material and put the spilled material in an appropriate waste disposal. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas cite if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers. Air Sensitive Hygroscopic

Section 8. Exposure Controls/Personal Protection

Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection
Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill
Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
TWA: 5 from ACGIH (TLV) [United States] SKIN
TWA: 2.3 (ppm) from NIOSH [United States]
TWA: 10 (mg/m³) from NIOSH [United States]
Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance
Solid. (Crystals solid.)

Molecular Weight
108.13 g/mole

pH (1% soln/water)
Not available.

Boiling Point
191.5°C (376.7°F)

Melting Point
30°C (86°F)

Critical Temperature
424°C (795.2°F)

Specific Gravity
1.047 (Water = 1)

Vapor Pressure
Not applicable.

Vapor Density
3.72 (Air = 1)

Volatility
Not available.

Odor Threshold
5 ppm

Water/Oil Dist. Coeff.
The product is more soluble in oil; log(oil/water) = 2

Ionicity (in Water)
Not available.

Continued on Next Page
**Dispersion Properties**
See solubility in water, diethyl ether.

**Solubility**
- Miscible in diethyl ether.
- Partially soluble in cold water.
- Soluble in 40 parts of water.
- Miscible in ethanol, chloroform.
- Soluble in carbon tetrachloride, vegetable oils, solution of fixed alkali hydroxides.

**Section 10. Stability and Reactivity Data**

**Stability**
The product is stable.

**Instability Temperature**
Not available.

**Conditions of Instability**
Heat, ignition sources, incompatible materials, light, air.

**Incompatibility with various substances**
Reactive with oxidizing agents.

**Corrosivity**
Non-corrosive in presence of glass.

**Special Remarks on Reactivity**
Reacts vigorously with oxidizing materials.
Air and light sensitive. Hygroscopic; keep container tightly closed.

**Special Remarks on Corrosivity**
Not available.

**Polymerization**
Will not occur.

**Section 11. Toxicological Information**

**Routes of Entry**
Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals**
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
- Acute oral toxicity (LD50): 121 mg/kg [Rat].
- Acute dermal toxicity (LD50): 620 mg/kg [Rat].
- Acute toxicity of the vapor (LC50): 179 mg/m³ 2 hours [Mouse].

**Chronic Effects on Humans**
CARCINOGENIC EFFECTS: Classified POSSIBLE by IRIS.
May cause damage to the following organs: kidneys, lungs, liver, skin, central nervous system (CNS).

**Other Toxic Effects on Humans**
Very hazardous in case of skin contact (irritant), of ingestion.
Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive), of inhalation (lung corrosive).

**Special Remarks on Toxicity to Animals**
Not available.

**Special Remarks on Chronic Effects on Humans**
May affect genetic material (mutagenic).
IRIS Carcinogen Assessment: C (Possible human carcinogen)

**Special Remarks on other Toxic Effects on Humans**
Acute Potential Health Effects:
- Skin: Causes severe irritation and burns. Skin contact with cresols has resulted in erythema (skin reddening), blanching, blistering, skin peeling, burning sensation, localized anesthesia (numbness), and occasionally, ochronosis, a darkening of the skin. It is also rapidly absorbed through the skin. When absorbed through the skin it can produce systemic effects such as profound central nervous system (CNS) depression, seizures, methemoglobinemia, pulmonary edema, damage to internal organs, such as the lungs, pancreas, spleen, heart, and loss of kidney function and necrosis of the liver and kidneys. Serious or even fatal poisoning may result if large areas of the skin are wet with cresol and it is not removed immediately. Hypersensitivity may also occur.
- Eyes: Causes severe irritation and corneal burns, keratitis, and possibly, in severe cases, blindness.
- Inhalation: It is extremely destructive to the tissue of the mucous membrane and upper respiratory tract. Inhalation may result in spasm, inflammation, and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea.
- Ingestion: Can cause burning pain in mouth and throat. White necrotic lesions in mouth, esophagus, and stomach, abdominal pain, peritonitis, nausea, vomiting, bloody diarrhea, dyspnea, pallor, sweating, central nervous system disturbances (somnolence, convulsions, headache, dizziness), tinnitus. Acute ingestion may lead to shock with cardiovascular disturbances (cardiac damage, weak irregular pulse, tachycardia, hypotension), shallow respirations, cyanosis, pallor, profound fall in body temperature, possible fleeting excitement and confusion followed by unconsciousness. Other symptoms of acute ingestion may include stentorous breathing, mucous rales, rhonchi,
frothing at nose and mouth and other signs of pulmonary edema, characteristic odor of phenol on the breath, impairment of kidney function (renal necrosis, nephritis, acute renal failure with scanty, dark-colored urine (oliguria, anuria), hematuria), moderately severe renal insufficiency, impairment of liver function, Methemoglobinemia, Heinz body hemolytic anemia, hyperbilirubinemia. Death from respiratory, circulatory or cardiac failure may occur.

Chronic Potential Health Effects:
Prolonged or repeated exposure by ingestion, skin absorption, or inhalation may cause kidney and liver damage, weight loss, and may also affect the skin, gastrointestinal tract, lungs, and central nervous system/nervous system. Symptoms may include vertigo, fainting, fatigue, insomnia, nervousness, tremors, mental disturbances, headache, cough, muscle aches and pain, difficulty swallowing, excess salivation, diarrhea, nausea, vomiting, lack of appetite or anorexia, pallor, partial paralysis, ochronosis, albuminuria, and dark urine, hepatitis, fatty liver degeneration.
Prolonged or repeated inhalation may also cause hypertension. Prolonged skin contact may cause allergic dermatitis.

Section 12. Ecological Information

Ecotoxicity
Not available.

BOD5 and COD
Not available.

Products of Biodegradation
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation
The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation
Not available.

Section 13. Disposal Considerations

Waste Disposal
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification
CLASS 6.1: Poisonous material.
Class 8: Corrosive material

Identification
UNNA: 3455 : Cresol, solid PG: II

Special Provisions for Transport
Not available.

DOT (Pictograms)

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
Connecticut hazard sus material survey.: o-Cresol
Illinois chemical safety act: o-Cresol
New York release reporting list: o-Cresol
Pennsylvania RTK: o-Cresol
Massachusetts RTK: o-Cresol
Massachusetts spill list: o-Cresol
New Jersey: o-Cresol
New Jersey spill list: o-Cresol
Louisiana RTK reporting list: o-Cresol
Louisiana spill reporting: o-Cresol
California Director's List of Hazardous Substances: o-Cresol
TSCA 8(b) inventory: o-Cresol
TSCA 4(a) proposed test rules: o-Cresol
TSCA 8(a) IUUR: o-Cresol
TSCA 8(c) H and S data reporting: o-Cresol: Effective date: 10/04/82; Sunset date: 10/04/92
SARA 302/304/311/312 extremely hazardous substances: o-Cresol

Continued on Next Page

**EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 202-423-8).**

**Canada: Listed on Canadian Domestic Substance List (DSL).**

**China: Listed on National Inventory.**

**Japan: Listed on National Inventory (ENC).**

**Korea: Listed on National Inventory (KECI).**

**Philippines: Listed on National Inventory (PICCS).**

**Australia: Listed on AICS.**

**California Proposition 65 Warnings**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other Regulations**

- EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 202-423-8).
- Canada: Listed on Canadian Domestic Substance List (DSL).
- China: Listed on National Inventory.
- Japan: Listed on National Inventory (ENC).
- Korea: Listed on National Inventory (KECI).
- Philippines: Listed on National Inventory (PICCS).
- Australia: Listed on AICS.

<table>
<thead>
<tr>
<th>Other Classifications</th>
<th>WHMIS (Canada) CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS E: Corrosive solid.</th>
<th>DSCL (EEC)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>S24/25- Toxic in contact with skin and if swallowed. R34- Causes burns. S37/39- Wear suitable gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).</td>
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**HMS (U.S.A.)**

- **Health Hazard** 3
- **Fire Hazard** 2
- **Reactivity** 0
- **Personal Protection**

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<thead>
<tr>
<th>Protective Equipment</th>
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<tbody>
<tr>
<td>Gloves</td>
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<tr>
<td>Synthetic apron</td>
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Continued on Next Page
Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

**Section 16. Other Information**

| MSDS Code  | C4774 |
| References | Not available. |
| Other Special Considerations | Not available. |

Validated by Sonia Owen on 12/17/2008.  
Verified by Sonia Owen.  
Printed 12/19/2008.

**CALL (310) 516-8000**

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.